

Amendments to the Claims:

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1 (Canceled)

2. (Currently amended) The method of claim 1, wherein the network performance metrics comprise one or more of throughput, average fetch time and packet loss.

3-4 (Canceled)

5. (Currently amended) ~~The method of claim 1~~ A method, comprising:

operating a control node of a communication network at a packet bandwidth wherein the control node coupled to a network node is located in a communication link between at least one server and at least one client,

determining at least one resonance state of a performance metric that exhibits improved network performance metrics at the control node by monitoring the performance metric while scanning across a range of bandwidths of the control node until the at least one resonance state of the performance metric is observed, the at least one resonance state indicating that one or more of the network performance metrics is optimized, and

setting said packet bandwidth of the control node to a value that corresponds to the at least one resonance state of the performance metrics that is optimized,

wherein the packet bandwidth is set by varying an inter-packet delay time over selected communication links at the control node.

6 (Canceled)

7. (Currently amended) The method of claim ~~6~~ 8, wherein the network performance metrics comprise one or more of throughput, average fetch time, and packet loss.

8 (Currently amended) ~~The method of claim 6~~ A method, comprising:

determining at least one resonance state of a performance metric that exhibits improved network performance metrics at a control node coupled to a network node inside a communication network by monitoring the performance metric while scanning across a range of bandwidths of the control node until the at least one resonance state of the performance metric is observed indicating that one or more of the network performance metrics is optimized; and

operating the control node within the communication network at a packet bandwidth, wherein the packet bandwidth is set to a value that corresponds to the at least one resonance state of the performance metric that is optimized, wherein the control node is located in a communication link between at least one server and at least one client, wherein the packet bandwidth is set by varying an inter-packet delay time over selected communication links at the control node.

9. (Currently amended) An apparatus to control congestion in a communication network, wherein the apparatus comprises:

a control node coupled to a network node, wherein the control node is located in a communication link between at least one server and at least one client, wherein the control node is to determine at least one resonance state of a performance metric that exhibits improved network performance metrics, wherein the at least one resonance state is determined by monitoring the performance metric while scanning across a range of bandwidths of the control node until the at least one resonance state of the performance metric is observed, the at least one resonance state indication that one or more of the performance metrics is optimized, wherein the control node operates at a packet bandwidth, wherein the packet bandwidth is set to a value that corresponds to the at least one resonance state of the performance metric that is optimized, and wherein the packet bandwidth is set by varying an inter-packet delay time over selected communication links at the control node.

10-11 (Canceled)

12. (Currently amended) The method of claim-45, wherein said resonance state is a best observed resonance state from the at least one resonance state.

13. (Currently amended) The method of claim-68, wherein said resonance state is a best observed resonance state from the at least one resonance state.

14. (Currently amended) The apparatus of claim-109, wherein said resonance state is a best observed resonance state from the at least one resonance state.